

WHAT IS CLAIMED:

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1. A composition for inducing the expression of a phase II enzyme comprising a lipid-soluble Echinacea extract.
2. The composition of claim 1 further comprising a pharmaceutically acceptable carrier.
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3. The composition of claim 1 wherein the Echinacea extract is extracted from Echinacea roots.
4. The composition of claim 3 wherein the lipid-soluble Echinacea extract further comprises a chloroform soluble Echinacea extract.
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5. The composition of claim 1 wherein the Echinacea extract is extracted from Echinacea aerial parts.
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6. The composition of claim 5 wherein the lipid-soluble Echinacea extract further comprises a chloroform soluble Echinacea extract.
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7. A method of inducing the expression of a phase II enzyme in a subject comprising administering to the subject a lipid-soluble Echinacea extract.
8. The method of claim 7 wherein the Echinacea extract is extracted from Echinacea roots.
9. The method of claim 8 wherein the lipid-soluble Echinacea extract further comprises a chloroform soluble Echinacea extract.
- II

10. The method of claim 7 wherein the *Echinacea* extract is extracted from *Echinacea* aerial parts.

5 11. The method of claim 10 wherein the lipid-soluble *Echinacea* extract further comprises a chloroform soluble *Echinacea* extract.

I. 12. A composition for inducing the expression of quinone reductase comprising a lipid-soluble *Echinacea* extract.

10 13. The composition of claim 12 wherein the *Echinacea* extract is extracted from *Echinacea* aerial parts.

14. The composition of claim 12 wherein the *Echinacea* extract is extracted from *Echinacea* roots.

15 III. 15. A method of producing lipid-soluble solids of harvested *Echinacea* plant material, the method comprising:

a) chopping the *Echinacea* plant material to produce a chopped plant material;

20 b) dehydrating the chopped plant material to produce a dehydrated plant material;

d) contacting the blended plant material with methanol to produce a methanol extraction solution;

25 e) drying the methanol extraction solution to produce a dried methanol extract;

f) combining at least a portion of the dried methanol extract with water to produce an aqueous suspension;

30 g) fractionating the aqueous suspension with petroleum ether to provide a petroleum ether fractionated aqueous layer and an organic petroleum ether layer;

h) fractionating the petroleum ether fractionated aqueous layer with chloroform to provide a chloroform fractionated aqueous layer and an organic chloroform layer chloroform;

i) collecting the organic chloroform layer; and,

j) drying the organic chloroform layer to provide a chloroform fraction powder.

16. The method of claim 15 further comprising:

a) adjusting the pH of the chloroform fractionated aqueous layer to about pH 2 to provide a pH-adjusted chloroform fractionated aqueous layer;

b) fractionating the pH-adjusted chloroform fractionated aqueous layer with chloroform to provide an acidic chloroform fractionated aqueous layer and an acidic organic chloroform layer;

c) collecting the acidic organic chloroform layer; and,

d) drying the acidic organic layer chloroform fraction to provide an acidic chloroform fraction powder.

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